1. Targeted GP-02 and Building 15

    a. Would it be more prudent to have a comprehensive utility investigation where utilities for the affected area are identified and investigated along both Dryden Road and East River Road? Is this perhaps a task to be done under the Remedial Investigation? Has this already been done?

    The PRPs are citing the lack of detections in the gas probe network for justification of no further action but how was placement of the probes decided? Were utility corridors and preferential pathways targeted for probe placement? If the gas probe network was originally designed based on the determination of preferential pathways, then a comprehensive utility investigation may not be needed.

    The network was sampled in the fall of 2009. Variations in seasons can affect gas flow (as seen with GP-02 spiking around mid-July through October). For effects on water table, summer months may be preferable. For lateral migration of gases under a cap scenario, the best time to sample to get an understanding of preferential pathways would be in the winter months when the ground is frozen and essentially acting as a cap to keep the gases from escaping vertically.

    Consider that though the gas probe network may be extensive, it has not been comprehensively sampled (so effects on seasonality may not be apparent) and may not have been designed with preferential pathways in mind (there may be abandoned utilities that do not connect to buildings but can transport the gases off site). If our goal is to find where explosive gases might be leaving the boundary, then we would want to explore the preferential pathways keeping in mind that some pathways may be present only during specific seasons.

2. Qualifiers for an actual utility corridor investigation

    a. Building 15 – utilities will only be investigated if methane levels below the building are above 10% LEL (0.5% CH_4), and if select gas probes around building 15 are then sampled and if any one of the select probes is above 100% LEL for 2 consecutive weeks, then utilities around Building 15 will be investigated.

    Why would we wait to sample preferential pathways if we have a threshold exceedance occurring below an occupied structure? It is necessary to determine the preferential pathway to the building as soon as there is an exceedance of the threshold criteria beneath the building.

    The situation required to trigger a utility investigation will never arise as long as the SSDS is going, as that is currently causing the sub-slab probes to read 0% CH_4 under Building 15 and because the gas probes in question have never had a reading above 100% LEL (they have come close though).

    If it is necessary to have the gas probes surrounding the building be a trigger for a utility corridor investigation, then consider that OAC 3745-27-12 (E)(5)(a) provides threshold

criteria for action regarding explosive gas levels at landfills. 100% LEL requires an action at the property boundary (they are assuming we don't have occupied structures directly on top of the landfill). An exceedance of 100% LEL at the gas probes in question would be near occupied structures on the landfill. It would be more appropriate to use the 10% LEL criteria they are using for the sub-slab reading at the gas probes as the gas probes are next to Building 15.

b. GP-02 – GP-02 is an off-site gas probe that exhibits CH_4 levels above 100% LEL in the summer months. In order for the utilities surrounding GP-02 to be sampled, GP-02 must first exhibit concentrations greater than 100% LEL, then select gas probes surrounding GP-02 will be sampled and if any of the select gas probes exhibits a detection above 100% LEL for 2 consecutive weeks, then the utilities surrounding GP-02 will be sampled.

   Why would we wait to sample preferential pathways if we are above 100% LEL at a gas probe that is off-site and also is situated near an occupied structure? The LEL exceedance at GP-02 is an ongoing violation of OAC 3745-27-12 – an investigation for preferential pathways coming from SDD&L is necessary as this probe is exhibiting CH_4 levels above the LEL and is off-site near an occupied structure. Consider a utility corridor investigation as well as permanent punch bars along Dryden Road.

   The PRPs cite that the CH_4 present at GP-02 may not be from SDD&L, therefore, they need to determine where the methane is coming from.

3. Sampling of utility corridors

   a. The WP states that if a utility corridor investigation is triggered, then the PRPs will sample only inside sewers and manholes, and sample around the bedding of utilities they cannot enter. The utility investigation should seek to investigate the pathway, which includes the higher permeable material the utility sits in as well as the interior of the utility. The guidance cited in the work plan (Wisconsin Department of Natural Resources *Guidance for Documenting the Investigation of Utility Corridors*, 2013) recommends sampling both inside (when possible) and outside utility lines (not one or the other, as is indicated in the WP).